

WHAT IS CLAIMED IS:

1. A fire-blocking door lock structure, comprising:

a bolt member connected with one end of an actuation mechanism inside the door lock structure; and

two latch members connected with the other end, relatively away from the bolt member, of the actuation mechanism by two pull rods respectively, and symmetrically positioned on both sides of the actuation mechanism inside the door lock structure; the latch members each comprising:

a latching frame;

a latching support movably installed in the latching frame;

a latching body rotatably installed in the latching support and pivotally connected to the latching frame;

a stop piece movably installed in the latching frame and the latching support, for placing the latching body in an extension position where at least one part of the latching body extends out of the latching support, wherein when the stop piece is moved by a force, it allows the latching body to sit in a retraction position where the latching body retracts inside the latching support; and

a driving piece having one end pivotally connected to the stop piece and the other end connected to the pull rods, for receiving a force from the pull rods to move the stop piece and drive the latching body to move between the extension position and the retraction position so as to lock and unlock the door lock structure.

2. The fire-blocking door lock structure of claim 1, wherein the bolt member comprises a pivot joint member, an operating piece penetrating the pivot joint member, a retaining piece disposed between the pivot joint member and the operating piece, and a driving piece pivotally connected with the pivot joint member and sleeved by a spring for generating a force in several phases.

3. The fire-blocking door lock structure of claim 2, wherein the pivot joint member comprises a first pivot joint and a second pivot joint rotatably and pivotally

connected with the driving piece of the bolt member, the operating piece is coaxial with the pivot joint member and engaged between the first pivot joint and the second pivot joint, and the retaining piece is used for axially supporting axial extension of the operating piece and the first pivot joint.

4. The fire-blocking door lock structure of claim 2, wherein the operating piece is a latch.

5. The fire-blocking door lock structure of claim 2, wherein the first pivot joint is pivoted on a draft bar to be shifted between a first position of the draft bar where the draft bar is engaged with the operating piece and opens the operating piece, and a second position of the draft bar where the draft bar is disengaged from the operating piece and fails to open the operating piece; and the second pivot joint biases the first pivot joint at the first position or the second position by means of the spring on the driving piece of the bolt member.

6. The fire-blocking door lock structure of claim 1, wherein the latching frame accommodates the latching support, the latching body, the stop piece, and the driving piece of the latch member.

7. The fire-blocking door lock structure of claim 1, wherein the latching frame and the latching support are formed with guide slots respectively corresponding to each other.

8. The fire-blocking door lock structure of claim 1, wherein the latching support accommodates the latching body, the stop piece, and the driving piece of the latch member.

9. The fire-blocking door lock structure of claim 1, wherein the latching body and the latching frame are penetrated by a first shaft for being jointly actuated.

10. The fire-blocking door lock structure of claim 1, wherein the latching body is moved to the retraction position inside the latching support to unlock the door lock structure.

11. The fire-blocking door lock structure of claim 1, wherein the latching body

is moved to the extension position where the at least one part of the latching body extends out of the latching support outside the latching support by the stop piece for to lock the door lock structure.

12. The fire-blocking door lock structure of claim 1, wherein the latching body is formed with a stop portion.

13. The fire-blocking door lock structure of claim 12, wherein the stop portion is positioned corresponding to the stop piece.

14. The fire-blocking door lock structure of claim 13, wherein the stop piece is in contact with the stop portion for keeping the latching body at the extension position.

15. The fire-blocking door lock structure of claim 1, wherein the latching frame, the latching support, the stop piece, the stop piece, and one end, which is connected to the stop piece, of the driving piece of the latch member are penetrated by a second shaft for being jointly actuated.

16. The fire-blocking door lock structure of claim 1, wherein the latching support, the driving piece of the latch member, and one end of the corresponding pull rod are penetrated by a third shaft for being jointly actuated.

17. The fire-blocking door lock structure of claim 16, wherein the third shaft further penetrates a connecting unit of the pull rod, to allow the latching support, the driving piece of the latch member and the pull rod to be jointly actuated, such that the latch member are simultaneously actuated by the pull rod that is driven by a force from movement of the actuation mechanism inside the door lock structure, so as to move the latching body to the retraction position inside the latching support for unlocking the door lock structure, and wherein when the force is released, the latching body is moved to the extension position to lock the door lock structure.

18. The fire-blocking door lock structure of claim 1, wherein the stop piece is formed with a positioning portion.

19. The fire-blocking door lock structure of claim 18, wherein the positioning portion of the stop piece and the driving piece of the latch member are coupled by a first

spring member formed in-between.

20. The fire-blocking door lock structure of claim 1, wherein the driving piece of the latch member and the latching frame are coupled by a second spring member in-between for generating an elastic force.